

NEW OR NOTEWORTHY PORTO RICAN FUNGI

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(WITH FOUR FIGURES)

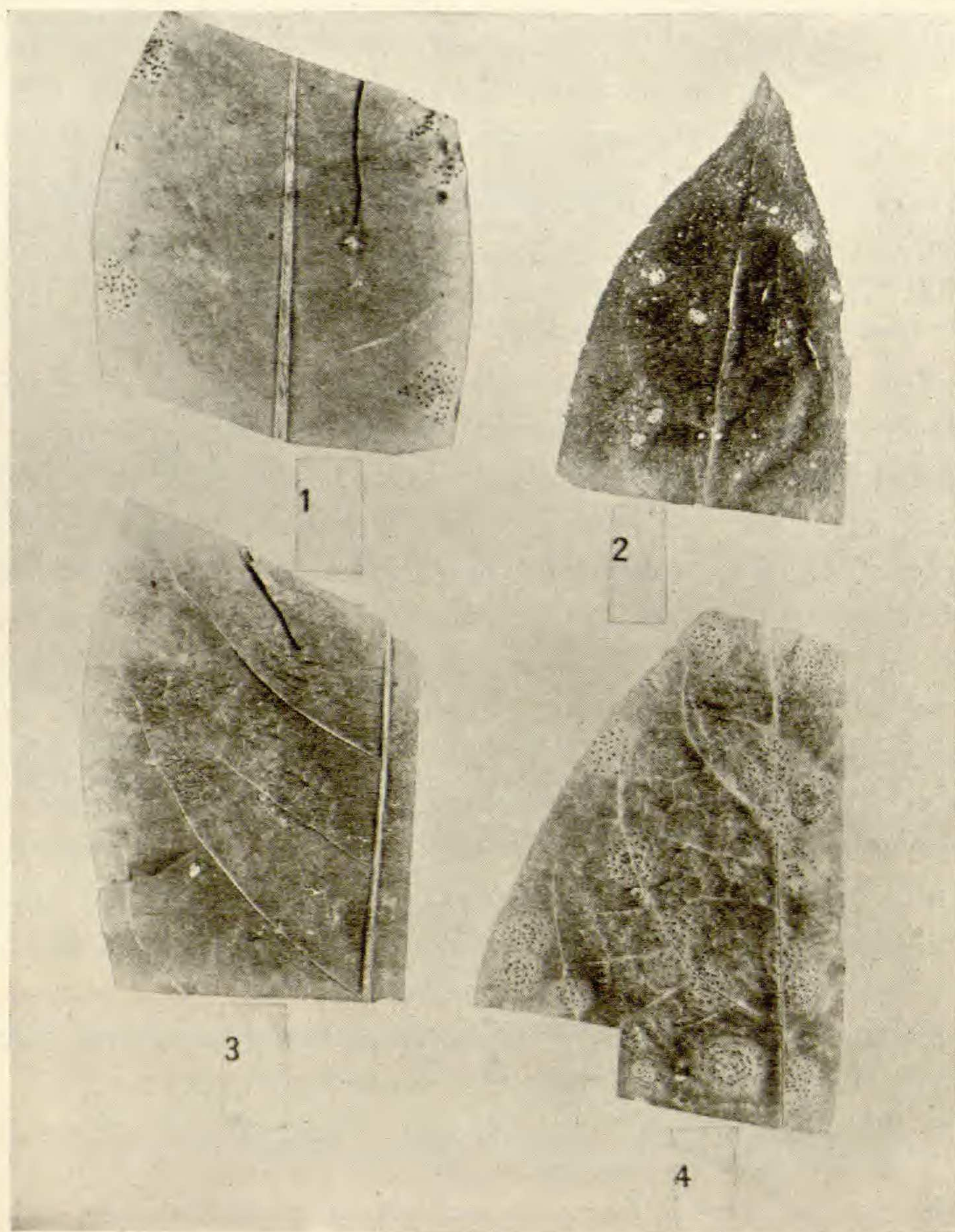
ANTHOSTOMELLA RHIZOMORPHAE (Ktz.) B. and V.—The spots caused by this fungus are pale to yellowish and are much swollen, so that they present a general aspect of insect galls. They are 0.5–1 cm. in diameter, circular, or when marginal more or less extended. Each spot contains several perithecia which are medially located in the leaf, that is, about equally distant from upper and lower epidermis. They are about 700 μ in diameter, thin-walled, the wall colorless, and have a coarse, hyaline mycelium extending throughout the spot, a black clypeus form in later stages occupying all of the space between the perithecium and the lower epidermis, which is 230–470 μ in diameter; the ostiole 40–50 μ in diameter. The paraphyses are numerous, threadlike, simple, septate, hyaline; asci oblong, stipitate, 150–175 or even 200 $\mu \times 50 \mu$, thin-walled, 8-spored, inordinate. Spores oblong, 24–40 \times 14–17 μ , brown when mature and 1-celled; the inner wall is uniform; the brown outer wall is pale yellow, wrinkled, and takes on very different appearances with different ages. Pycnidia are associated with the perithecia apparently on the same mycelium, oval, 125 μ across, 218 deep, with a thin clypeus; basidia short, simple; conidia oblong, pointed, obscurely 1-septate, pale straw colored, 3 \times 10 μ .

On *Rhizophora Mangle*. Guanica, 2484; Penueles, 4559; Ponce, 8591, 9070; Cataño, 7607; San Jose Laguna, 9215.

The type is described on "coriaceous leaves" from Suriname, and may well have been on *Rhizophora*. The fungus is quite striking in appearance, but might be readily mistaken for an insect gall and thus overlooked by mycologists. The large spores with the several-layered coats, which give very striking appearances as they mature, are interesting structures.

Linospora trichostigmae, sp. nov.—Spots indefinite, 5–10 mm. in diameter, thickly studded with perithecia. Perithecia spherical, 150 to 200 to 250 μ in diameter, covered by a distinct clypeus and surrounded by a narrow (30–100 μ) pale zone. Clypeus

black, mostly epiphyllous, rarely hypophyllous. Ostiole irregular in shape. Asci cylindrical, $90-112 \times 10-14 \mu$, thick-walled. Para-



FIGS. 1-4.—Fig. 1, *Anthostomella rhizomorphae*, showing black clypei in pale spots; fig. 2, *Linospora trichostigmae*: black perithecia in small, blached, dead areas; fig. 3, *Trabutia portoricensis*: numerous clustered perithecia in poorly defined spots; fig. 4, *Trabutiella cordiae*: perithecia arranged in circles in dead spots.

physes few, fine, threadlike. Spores linear, filiform, several, septate, pale yellow. Conidia 1-celled, hyaline, pointed at each end, very variable in size, mostly $21-24 \times 7 \mu$, but often 48μ long,

and also often quite small, borne in cavities indistinguishable from the perithecia.

On *Trichostigma octandra*, Guayanilla, 5924.

The perithecia are conspicuous from above on account of the black clypeus, and from below because of the protuberance that they cause. At maturity the clypeus falls away, the contents of the perithecia drop out, and a hollow "poc-mark" cavity remains. The variability of the conidia is quite remarkable.

Trabutia portoricensis, sp. nov.—Spots approximately circular, densely set with perithecia, area of young spots not at all or but slightly discolored, tissue of old spots dead, tan colored. Perithecia conspicuous above, due to the shining black clypeus, from below by the protuberance which they cause. Perithecia opening epiphyllous, clypeus black, 80–95 μ in diameter. Ostiole central, 10–15 μ in diameter. Perithecium central in the mesophyll. Asci irregular, thin-walled, 8-spored, inordinate, 68 \times 17 μ . Paraphyses many; spores filiform, oblong, obtuse, 24 \times 7 μ , continuous, hyaline.

On *Cocolobis nivea*, Mayaguez, 3907a (type), 976.

Trabutiella, gen. nov.—Similar to *Trabutia*, but with the asci 16-spored. Similar to *Ditopella*, but distinguished from it by its clypeus. Type of genus the following.

Trabutiella cordiae, sp. nov.—Spots when young but slightly discolored; later the tissue dies and the spots are tan colored, or they may remain green longer than the adjacent healthy tissue. Spots definitely bordered, almost exactly circular, 5–10 mm. in diameter, with the perithecia in quite regular concentric rings. The black clypeus always epiphyllous, about 280 μ in diameter, or oblong and 240 \times 500 μ . Ostiole 45–75 μ in diameter. Perithecia not visible from below, located in the mesophyll, 260–360 μ in diameter. Asci 85 \times 17 μ , 16-spored, thin-walled, inordinate; spores oblong, pointed at each end, 20 \times 3.5 μ , continuous, hyaline.

On *Cordia collococca*, Añasco, 276 (type); Mayaguez, 6295, 3907; Patillo Springs, 5730; Jayuda, 3977a; Hormigueros, 215.

Hyponectria phaseoli, sp. nov.—Spots circular, 5–10 mm. in diameter, amphigenous, few to numerous, often coalescing, pale yellowish, translucent, border indefinite. Perithecia abundant, immersed, translucent; when mature, with distinct protruding

is essentially a new book rather than a second edition of that formerly noted.³

Beginning with a sketch of the history of the botanical exploration of New Zealand, and noting the landmarks in her botanical literature, the author instructs the reader regarding the fundamental concepts of plant ecology in clear and simple terms, preparing him to follow appreciatively the description of New Zealand plants, not only considered as individuals, but as grouped in communities. Separate chapters are devoted to the vegetation of the sea coast, the inland waters, the mountains, and the outlying islands, as well as to the forests, the scrub, and the grasslands. The descriptions are so good that not only may they be understood by the New Zealand school boy (for it is an authorized textbook in the public schools), but they may also serve to furnish a graphic picture of a unique vegetation to the ecologists of other lands. For the latter the separation of New Zealand into botanical districts and the analysis of the flora into its different elements is particularly interesting. Moreover, the botanist is not at a loss to know what plants are intended by their common designations, for the scientific names always follow. In this, as well as in the use of many excellent illustrations, the volume may well be regarded as showing a standard of excellence seldom attained.—GEO. D. FULLER.

MINOR NOTICES

Cactaceae.—The second volume of the elaborate monograph of Cactaceae by BRITTON and ROSE⁴ has just appeared. In fullness of description and wealth of illustration it leaves nothing to be desired. The colored plates are particularly noteworthy. The volume includes two of the eight subtribes of Cereae. In subtribe Cereanae, 38 genera are recognized, including 16 new genera as follows: *Monvillea*, *Espostoa*, *Browningia*, *Stetsonia*, *Corryocactus*, *Erdisia*, *Leocereus*, *Dendrocereus*, *Machaerocereus*, *Brachycereus*, *Jasminocereus*, *Binghamia*, *Arrojadoa*, *Facheiroa*, *Zehnterella*, and *Neoraimondia*. There are also described 40 new species distributed among the various genera. The subtribe Hylocereanae includes nine genera, *Wilmattea*, *Mediocactus*, and *Deamia* being new, and 48 species, 6 of which are new. The monograph is an impressive illustration of the extensiveness of the cactus flora and its need of taxonomic reconstruction.—J.M.C.

Flora of Jamaica.—The fourth volume of FAWCETT and RENDLE'S *Flora of Jamaica*⁵ continues the Dicotyledons, which began in the third volume,

³ BOT. GAZ. 52: 159. 1911.

⁴ BRITTON, N. L., and ROSE, J. N., The Cactaceae. Vol. II. Publ. Carnegie Inst. no. 248. pp. vii+239. pls. 40. figs. 305. 1920.

⁵ FAWCETT, W., and RENDLE, A. B., Flora of Jamaica, containing descriptions of the flowering plants known from the island. Vol. IV. Dicotyledons (Leguminosae to Callitrichaceae). 8vo. xv+369. figs. 114. Published by the British Museum. 1920.